Precision

Absolute Sonic Perfection

# PX 210 BT

Instruction manual

# Contents

# Important safety instructions

- Please read these instructions carefully and completely before using the headphones.
- Make these instructions easily accessible to all users at all times. Always include these instructions when passing the headphones on to third parties.
- Only use the headphones in aircraft where wireless **Bluetooth**® transmission is permitted.
- Do not use the headphones in situations which require special attention (e.g. in traffic or when performing skilled jobs).
- Always keep the headphones dry and do not expose them to extreme temperatures (normal operating temperatures: 10°C to 35°C).
  - Use the headphones with care and store them in a clean, dust-free environment.
  - Switch off the headphones after use to conserve battery power. Remove the batteries if the headphones will not be used for extended periods of time.
- The headphones contain magnets that generate a magnetic field which could cause dangerous interference with cardiac pacemakers and implanted defibrillators. Keep the headphones at least 1.2'' (3 cm) from cardiac pacemakers or implanted defibrillators.
- Please protect your hearing from high volume levels. Sennheiser headphones also sound exceptionally good at low volumes.
- Only use the supplied mains unit and charging cable.
- To reduce the risk of fire or electric shock, do not use the device and the mains unit near water and do not expose them to rain or moisture.
- Unplug the mains unit from the wall socket
  - to completely disconnect the device from the mains
  - during lightning storms or
  - when unused for long periods of time.
- Only operate the mains unit from the type of power source specified in the chapter ''Specifications'' (see page 23).
- Ensure that the mains unit is
  - in a safe operating condition and easily accessible,
  - properly plugged into the wall socket,
  - only operated within the permissible temperature range,
  - not covered or exposed to direct sunlight for longer periods of time in order to prevent heat accumulation (see ''Specifications'' on page 23).
- Do not operate the device and the mains unit near any heat sources.
- Only use attachments/accessories specified by Sennheiser.

## Intended use

Intended use of the headphones includes

- having read this instruction manual, especially the chapter "Important safety instructions" on page 2,
- using the headphones within the operating conditions and limitations described in this instruction manual.

"Improper use" means using the headphones other than as described in this instruction manual, or under operating conditions which differ from those described herein.

## Safety instructions for the Lithium-Polymer battery pack

If abused or misused, the battery pack may leak. In extreme cases, it may even present

- a heat hazard,
- a fire hazard,
- an explosion hazard,
- a smoke or gas hazard.

Please understand that Sennheiser does not accept liability for damage arising from abuse or misuse.

| | | | |
|---|---|---|---|
| | Keep away from children. | | Do not pack charged batteries loose – danger of shorting out/fire hazard. |
| | Observe correct polarity. | | Do not short-circuit. |
| | Dispose of the battery pack at special collection points or return it to your specialist dealer. | | Switch battery pack-powered devices off after use. |
| | Only charge the battery pack with the appropriate Sennheiser chargers. | | When not using the battery pack for extended periods of time, charge it regularly (about every 3 months). |
| | Only charge the battery pack at ambient temperatures between 10°C/50°F and 40°C/104°F. | | Do not heat above 70°C/158°F, e.g. do not expose to sunlight or throw into a fire. |
| | Do not mutilate or dismantle. | | Do not continue to use a defective battery pack. |
| | Immediately remove the battery pack from an obviously defective device. | | When not using the device for extended periods of time, remove the battery pack from the device. |
| | Only use the original Sennheiser battery pack. | | Do not expose to moisture. |

# PX 210 BT

The PX 210 BT headphones provide undisturbed music enjoyment in noisy environments – even without the constrictions of cables. Their supra-aural, closed design make the PX 210 BT especially suitable for use with in-flight entertainment systems.

## Bluetooth

The PX 210 BT comply with the new **Bluetooth** 2.1 standard. Via their **Bluetooth** interface, they can be connected to a wide variety of **Bluetooth** enabled devices. Bluetooth wireless technology allows the PX 210 BT to communicate with your **Bluetooth** enabled device (e.g. mobile phone, MP3 player, PC or PDA) within a range of up to 10 meters.

## apt-X®

With apt-X audio coding, you can be assured of crisp, pure and full stereo sound. It allows you to not only hear, but experience and feel the audio as it was intended. Utilizing apt-X, **Bluetooth** technology can now offer wireless audio quality that is indistinguishable from the highest quality wired connection.

From major public broadcasters to film production studios, apt-X is used throughout the world to transmit high quality digital audio from A to Z in real-time. It was developed to meet the exacting standards of musicians and audio engineers who love the exceptional dynamic range and high fidelity it provides.

Now available on selected consumer devices, the apt-X technology ensures that music lovers everywhere can stream the rich listening experience that only apt-X can deliver.

## Additional features

- Great for travel: comfortable, rugged and foldable headphone construction
- Optional connection via audio cable for music enjoyment without **Bluetooth** technology
- Outstanding sound quality due to patented adaptive baffle damping and Duofol diaphragms

# Delivery includes

1 PX 210 BT headphones
1 BA 370 PX battery pack
1 USB charging cable
1 PSC 03R-050 mains unit with country adapters
1 audio cable (2.5 mm to 3.5 mm jack plug)
1 transport case
1 quick start guide
1 CD ROM with
– detailed instruction manual (PDF file)
– interactive instruction manual

## Overview of the pictograms

### Meaning of the pictograms for pressing a button

| Pictogram | Meaning |
|---|---|
| | Briefly press this button. |
| 4 s | Keep this button pressed for 4 seconds. |
| | Keep this button pressed until the desired setting is made or the desired action is completed. |

### Meaning of the pictograms for the flashing of the LED

| Pictogram | Meaning |
|---|---|
| ¤ | This pictogram symbolizes a flashing. |
| – | This pictogram symbolizes an interruption. |
| 1 s | This pictogram symbolizes an interval. |
| | This pictogram symbolizes a continuous flashing. |

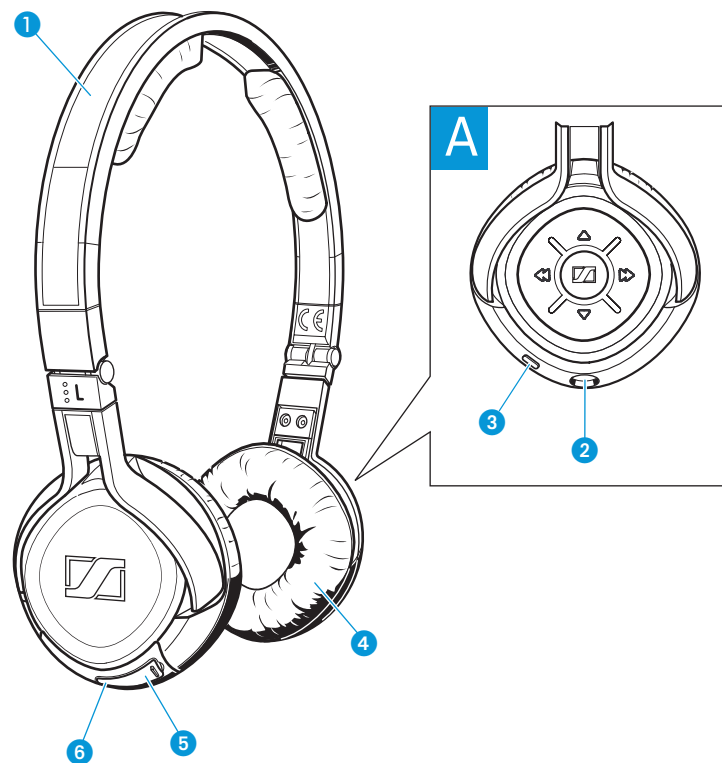
Examples of some of the pictograms that are used throughout this instruction manual:

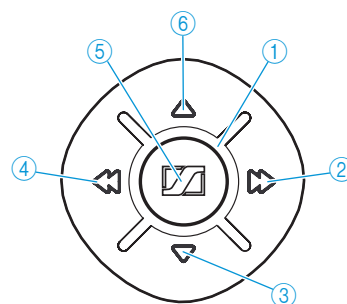
| Pictogram | Meaning |
|---|---|
| – ¤ – 3s | The LED flashes once every 3 seconds. |
| ¤ – ¤ – ¤ 1 s | The LED flashes 3 times per second. |
| – ¤ ¤ – 1 s | The LED flashes in a rhythmic sequence. |
| ¤ – ¤ – ¤ | The LED flashes blue 3 times and then goes off. |

### The pictogram "i"

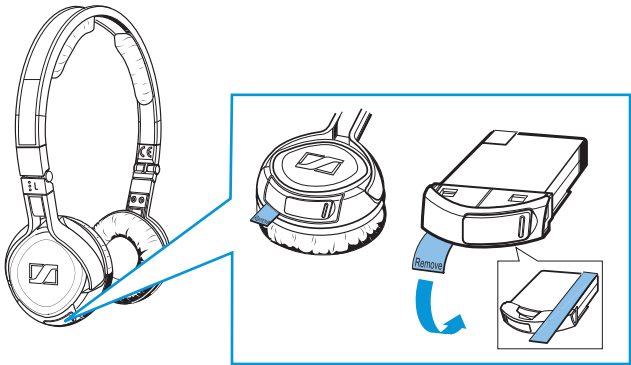
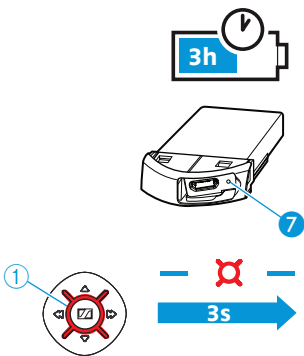
**This note provides important information!**

Notes marked with the pictogram "i" provide important information on the use of the headphones.

# Product overview

1 Headband
2 Socket for audio cable
3 Bluetooth button
4 Ear pad
5 Socket for charging cable
6 Battery pack compartment

## Operating panel

① LED
② Fast-forward ⏩ button
③ Volume ▼ button
④ Rewind ⏪ button
⑤ Master button
⑥ Volume ▲ button

# Putting the PX 210 BT into operation

Before using the PX 210 BT for the first time, remove the protection strip from the battery pack.

## Charging the battery pack

▶ Before using the battery pack for the first time, charge it for at least 3 hours.

When charging the battery pack, the LED 7 on the battery pack lights up red. When the battery pack is fully charged, the LED 7 on the battery pack lights up green.

When the battery pack is almost flat, the LED 1 on the headphones flashes red. You hear a short, negative acknowledgement tone.

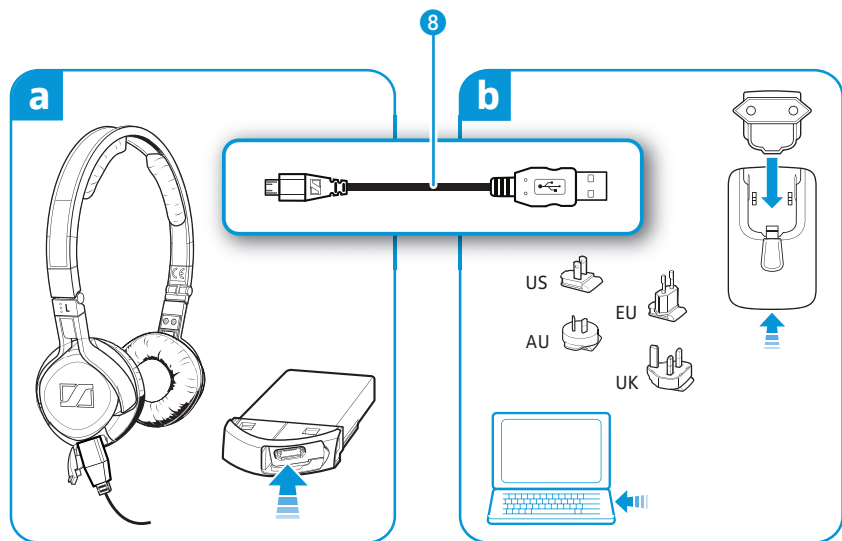
The operating time of the battery pack depends on the device settings, the listening situation and the audio sources used.

| Type of use | Operating time |
|---|---|
| **Bluetooth** technology | 10 hours |

Remove the battery pack if the headphones will not be used for extended periods of time.

You can also charge the battery pack while using the headphones.

### Possibilities of charging the battery pack

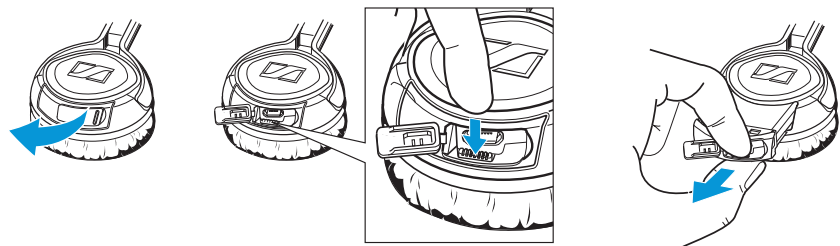
First, connect the charging cable 8 to the battery pack as described in section a and then connect the charging cable 8 to a power source as described in section b.

### a Connecting the charging cable to the battery pack

You can charge the battery pack either inside or outside the headphones. This is helpful if you are using a spare battery pack (to be ordered separately).

To charge the battery pack inside the headphones:

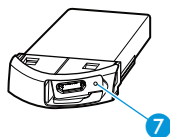
- Open the battery pack compartment cover 6 on the left ear cup.
- Connect the charging cable 8 to the socket for charging cable 5 on the headphones.

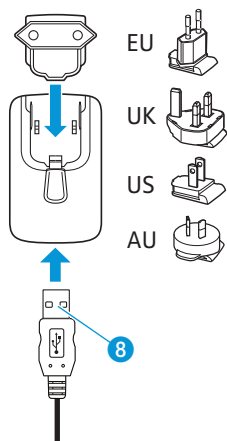
To charge the battery pack outside the headphones:

- Open the battery pack compartment cover 6 on the left ear cup.
- Press the button next to the battery pack compartment and remove the battery pack.

- Connect the charging cable 8 to the socket for charging cable 5 on the battery pack.

### b Connecting the charging cable to the mains unit, to a PC or to other USB devices

In order to charge the battery pack, you can connect the charging cable to either the USB socket of your PC or the supplied mains unit or to other USB devices.

To connect the charging cable to a PC:

- Connect the USB plug of the charging cable 8 to the USB socket of your PC.
  The battery pack is being charged. The LED 7 on the battery pack lights up red.

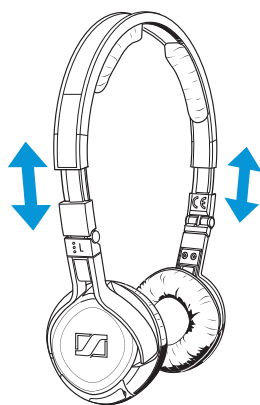
To connect the charging cable to the mains unit:

- Connect the charging cable 8 to the mains unit.

- Plug the suitable country adapter onto the mains unit.

- Plug the mains unit into a wall socket.
  The battery pack is being charged. The LED 7 on the battery pack lights up red.
- After charging, unplug the mains unit from the wall socket.

If you have charged the battery pack outside the headphones:

- Insert the charged battery pack into the headphone's battery pack compartment until it locks into place.
- Close the battery pack compartment cover 6.

## Adjusting the headband

For optimum transmission quality, good noise attenuation and best possible comfort, the headband has to be adjusted to properly fit your head:

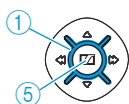
- Wear the headphones so that the headband 1 runs over the top of your head.
- Adjust the length of the headband so that
  – the ear pads 4 rest comfortably against the ears,
  – you feel even, gentle pressure around your ears,
  – a snug fit of the headband 1 on the head is ensured.
- To ensure maximum noise attenuation, final adjustment is best made in a noisy environment.

## Switching the PX 210 BT on/off

CAUTION! **Hearing damage due to high volumes!**

Listening at high volume levels for long periods can lead to permanent hearing defects. Please protect your hearing. Sennheiser headphones also sound exceptionally good at low volumes.

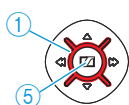
▶ Set the volume to a comfortable level.

### Switching the PX 210 BT on

▶ Press the Master button ⑤ and keep it pressed until the LED ① flashes blue. You hear an ascending beep.

– When switching the headphones on for the first time, they will automatically go into pairing mode. The headphones are waiting to be paired with a **Bluetooth** enabled device (see page 12).

– When the headphones are already paired with an audio source, the **Bluetooth** connection is automatically established. You hear an ascending beep and then your audio source.

– When the headphones are already paired with an audio source but the audio source is switched off or out of range, the LED ① flashes blue. The headphones will try for 3 minutes to connect to one of the up to 8 previously paired audio sources. If this fails, the headphones automatically switch off after 60 minutes.

### Switching the PX 210 BT off

▶ Press the Master button ⑤ and keep it pressed until the LED ① flashes 3 times red.

You hear a descending beep. The **Bluetooth** connection is automatically deactivated. The headphones switch off.

## Connecting the PX 210 BT to the audio source

CAUTION! **Danger of malfunction!**

The transmitted radio waves can impair the operation of sensitive and unprotected devices.

- Only use the headphones in aircraft where wireless **Bluetooth** transmission is permitted or use the audio cable instead (see "Connecting the PX 210 BT using the audio cable" on page 15).

The headphones comply with the **Bluetooth** 2.1 standard. In order that data can be transmitted wirelessly using **Bluetooth** technology, you have to register your headphones with your audio source (pairing).

The headphones can save the connection profiles of up to 8 **Bluetooth** devices with which they have been paired. After switch-on, the headphones automatically connect to one of these devices.

If you pair the headphones with a ninth audio source, the saved connection profile of the first **Bluetooth** device will be overwritten. If you want to re-establish a connection with the first audio source, you have to pair the headphones with this audio source again.

If your audio source does not have a **Bluetooth** interface, use an optional dongle (see "Accessories and spare parts" on page 22). In addition to adding Bluetooth capability to your audio source, this dongle uses apt-X, a technology that ensures crisp, pure and full stereo sound. With apt-X, Bluetooth can now offer wireless audio quality that is indistinguishable from the highest quality wired connection.

A connection to the headphones is only possible if your audio source supports the A2DP profile.

## Pairing the PX 210 BT with an audio source

▶ Make sure that your headphones are switched off (see "Switching the PX 210 BT on/off" on page 11).

When switching the headphones on for the first time, they will automatically go into pairing mode. The headphones are waiting to be paired with a **Bluetooth** enabled device (see page 12).

▶ Press the Master button ⑤ and keep it pressed until the LED ① alternately flashes blue and red.

▶ On your audio source, activate the **Bluetooth** function "Add a new device".

▶ Proceed as described in the instruction manual of the audio source.

If a suitable audio source is found, the devices will exchange device identification information. The LED ① flashes 3 times blue and you hear an ascending beep. The devices have identified each other and the headphones are paired with the audio source.

PIN code

When the audio source prompts for a password or PIN code, enter the default PIN code "0000".

If a connection is established, the LED ① continues to slowly flash blue.

If no device is found within approx. 5 minutes, the LED ① flashes 3 times red and you hear a descending beep. The headphones will then try for 3 minutes to connect to one of the up to 8 previously paired audio sources. If this fails, the headphones automatically switch off after 60 minutes.

▶ In this case, repeat the necessary steps to pair the headphones with the audio source again.

## Switching the "Bluetooth connection" flashing on/off

▶ Switch the headphones off (see "Switching the PX 210 BT on/off" on page 11).

To switch the flashing on during a Bluetooth connection:

▶ Press the Master button ⑤ and keep it pressed until the LED ① alternately flashes blue and red.

▶ Briefly press the Volume ▲ button ⑥.

To switch the flashing off during a Bluetooth connection:

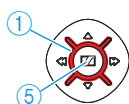
▶ Briefly press the Volume ▼ button ③.

### Disconnecting the Bluetooth connection

The Bluetooth button ❸ is backlit, indicating the current setting. The backlighting goes off after a short time to conserve energy.

- Press any button on the headphones to display the current setting of the **Bluetooth** function.

To disconnect the **Bluetooth** connection to the audio source, you can switch off the headphones or the **Bluetooth** function. This setting is retained until the **Bluetooth** function is switched on again.

To switch the headphones off:

- Press the Master button ⑤ and keep it pressed until the LED ① flashes 3 times red.
  You hear a descending beep. The **Bluetooth** connection is automatically deactivated. The headphones switch off.

To switch the **Bluetooth** function off:

- Press the Bluetooth button ❸ and keep it pressed until the LED ① flashes 3 times red. You hear a descending beep.
  The Bluetooth button ❸ goes off. The **Bluetooth** function is switched off.

## Connecting the PX 210 BT using the audio cable

### Connecting the audio cable

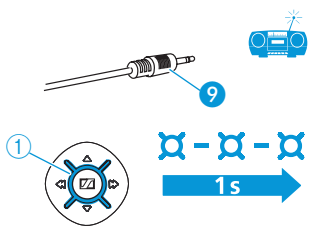
You can connect the headphones to the audio source using the audio cable if

- you do not want to use the **Bluetooth** function,
- you are not allowed to use the **Bluetooth** function (some airlines do not allow **Bluetooth** transmission)
  or
- the battery pack is flat.

When the audio cable is connected to the headphones, the **Bluetooth** function cannot be switched on.

If the headphones are already connected to the audio source via the **Bluetooth** interface, the **Bluetooth** connection is automatically disconnected when you connect the audio cable. The LED ① flashes 3 times red and you hear a descending beep.

▶ Connect the 2.5 mm jack plug of the audio cable to the socket ② of the headphones.

▶ Connect the 3.5 mm jack plug of the audio cable ⑨ to the headphone socket of your audio source.

When the audio cable is connected to your audio source, you hear the sound from your audio source and the LED ① flashes blue.

### Detaching the audio cable

If you want to use the PX 210 BT only as **Bluetooth** headphones, you can detach the audio cable ⑨.

▶ Pull the 2.5 mm jack plug of the audio cable ⑨ from the socket ② of the headphones.

When detaching the audio cable, the **Bluetooth** function is not automatically switched on.

▶ Switch the **Bluetooth** function on again (see “Switching the **Bluetooth** function on/off” on page 16).

# Using the PX 210 BT

## Adjusting the PX 210 BT to the listening situation

The headphones have a **Bluetooth** function for wireless connectivity. Depending on the listening situation, you can switch this function on or off.

### Switching the Bluetooth function on/off

Via the **Bluetooth** interface, the headphones can be connected to a wide variety of **Bluetooth** enabled devices.

To switch the **Bluetooth** function on:

▶ Press the Bluetooth button 3 and keep it pressed until the LED 1 flashes 3 times blue. The **Bluetooth** function is switched on.

To switch the **Bluetooth** function off:

▶ Press the Bluetooth button 3 and keep it pressed until the LED 1 flashes 3 times red. You hear a descending beep.
The Bluetooth button 3 goes off. The LED 1 flashes blue and the **Bluetooth** function is switched off.

## Changing the volume

The PX 210 BT allow you to change the volume of the audio signal:

| Button | Duration | Function | Button | Duration | Function |
|---|---|---|---|---|---|
| | | Incrementally increases the volume | | | Incrementally reduces the volume |
| | 1s | Continuously increases the volume | | 1s | Continuously reduces the volume |

If you press the respective button briefly, the volume is changed incrementally; if you hold down the button, the volume is changed continuously.

When the minimum or maximum volume is reached, you hear an acknowledgement tone.

## Remote-controlling connected devices from the PX 210 BT

You can directly remote-control any device supporting the AVRCP profile and connected to the PX 210 BT by using the buttons on the headphones. Please refer to the instruction manual of your audio source for information on whether your device supports the AVRCP profile.

If your device does not support the AVRCP profile, you can use an optional dongle. Using the iPod dongle or the USB dongle, you can remote-control the connected devices from the headphones.

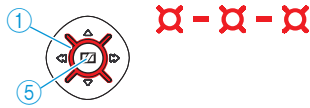
### Remote-controlling the audio source from the PX 210 BT

If your headphones have a **Bluetooth** connection to an audio source (e.g. iPod, MP3 or CD player), you can use the PX 210 BT to remote-control the audio source as follows:

| Button | Duration | Function | Button | Duration | Function |
|---|---|---|---|---|---|
| | | Incrementally increases the volume | | | Incrementally reduces the volume |
| | 1s | Continuously increases the volume | | 1s | Continuously reduces the volume |
| | | Skips to the next track | | | Skips to the previous track |
| | 1s | Fast-forwards the track * | | 1s | Rewinds the track * |
| | | Plays and repeats the track | | 1s | Stops the track (acknowledge-ment tone) |

* These functions are not supported by all connected **Bluetooth** devices.

## Resetting the settings of the PX 210 BT

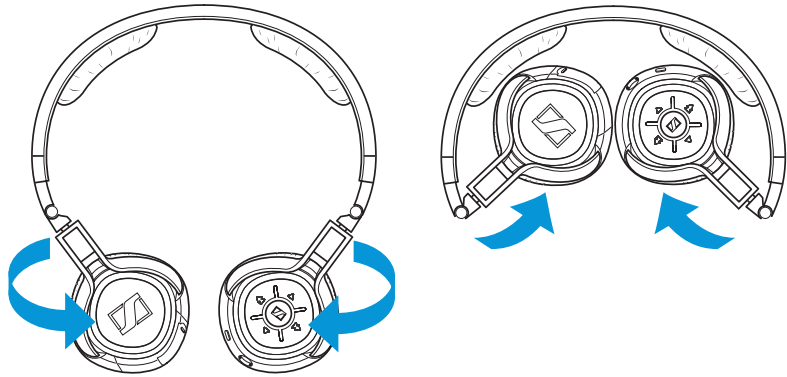
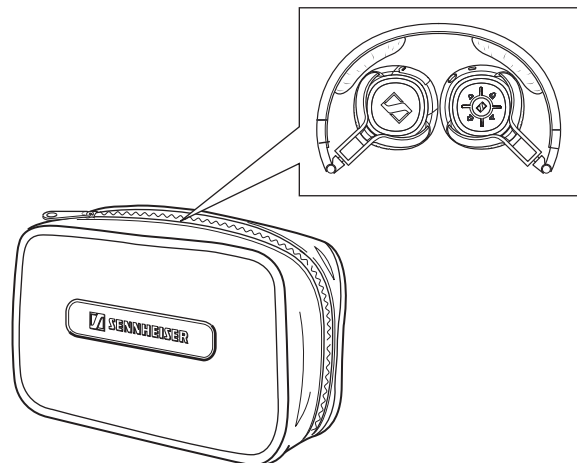
You can reset all settings of your headphones to the factory default settings. This allows you to prevent that other users of the headphones can access your **Bluetooth** enabled devices. You can then pair 8 new devices with the headphones.

▶ Press the Master button ⑤ and keep it pressed until the LED ① flashes 3 times red.
The headphones switch off (see "Switching the PX 210 BT off" on page 11).

▶ Press the Master button ⑤ and keep it pressed until the LED ① alternately flashes blue and red.

▶ Press the Bluetooth button ❸ and keep it pressed until the settings of the headphones are reset.

# Transporting the PX 210 BT

For space-saving transportation, the headphones can be folded up flatly and compactly.

- Rotate the ear cups by 90°.
- Tuck the ear cups between the headband.

- Place the headphones flat into the transport case.

# Cleaning and maintaining the PX 210 BT

## Cleaning the PX 210 BT

CAUTION! **Liquids can damage the electronics of the device!**

Liquids entering the housing of the device can cause a short-circuit and damage the electronics.

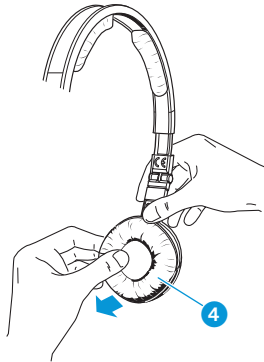
- Keep all liquids far away from the device.
- Do not use any cleansing agents or solvents.

For reasons of hygiene, you should clean the headphones regularly:

- Before cleaning, make sure that the headphones are not recharged via the mains.
- Only use a soft, slightly damp cloth to clean the headphones.

## Replacing the ear pads

You can replace the ear pads. Spare ear pads are available as accessories (see "Accessories and spare parts" on page 22).

- Grasp the edge of the ear pad 4 behind the ear cup and peel it up and away from the ear cup.
- Slide the new ear pad 4 onto the ear cup.

# If a problem occurs ...

| Problem | Possible cause | Solution |
|---|---|---|
| No operation indicator – headphones cannot be switched on | The battery pack is flat. | Recharge the battery pack (see page 8). |
| No audio signal when the audio cable is connected | The jack plug of the audio cable is not properly connected. | Check the connection to your audio source (see page 15). |
| No audio signal during **Bluetooth** connection | The headphones are switched off. | Switch the headphones on (see page 11). |
| | The headphones are not paired with an audio source. | Check if the headphones are paired. If necessary, pair the headphones with the audio source again (see page 13). |
| | The **Bluetooth** function on the headphones is switched off. | Switch the **Bluetooth** function on the headphones on (see page 16). |
| | The audio cable is connected to the headphones. | The connection of the audio cable automatically switches off the **Bluetooth** connection. Remove the audio cable and then switch the **Bluetooth** function on again (see page 16). |
| | The volume is adjusted too low. | Increase the volume (see page 16). |
| Headphones cannot be paired | The pairing does not work. | Check if the audio source supports the A2DP profile. If not, use one of the optional dongles. |
| | The audio source is switched off. | Switch the audio source on (see page 12). |
| Headphones do not react to any button press | The operation of the headphones is faulty. | Remove the battery pack from the headphones. Reinsert the battery pack into the headphones. Switch the headphones on again. |
| **Bluetooth** connection is suddenly interrupted | The **Bluetooth** button has been pressed too long. | Switch the **Bluetooth** function on (see page 16). |

# Accessories and spare parts

The following PX 210 BT accessories are available from your specialist dealer:

| Cat. No. | Accessory/spare part |
|---|---|
| 531404 | Ear pads, 1 pair |
| 531405 | Headband padding, 1 pair |
| 525776 | PSC 03R-050 mains unit with 4 country adapters (EU/UK/US/AU) |
| 531406 | Audio cable (2.5 mm jack plug to 3.5 mm jack plug) |
| 088526 | In-flight adapter (3.5 mm double mono jack) |
| 077046 | Audio adapter (3.5 mm jack socket to ¼" (6.35 mm) jack plug) |
| 531407 | USB cable (microUSB to USB) |
| 535105 | BA 370 PX battery pack |
| 502388 | BTD 300 Audio |
| 502390 | BTD 300 USB |
| 502389 | BTD 300i |

# Specifications

| | |
|---|---|
| Transducer principle | dynamic, closed |
| Ear coupling | supra-aural |
| Frequency response | 15–22,000 Hz |
| Nominal impedance active/passive | 590/100 Ω |
| Sound pressure level at 1 kHz and 1 Volt | 107 dB SPL |
| THD at 1 kHz | < 0.1% |
| Audio connection | 3.5 mm stereo jack socket |
| Cable length | |
| Audio cable | 1.4 m |
| Charging cable | 0.8 m |
| Weight | 105 g |
| BA 370 PX battery pack | 3.7 V; 250 mAh Lithium-Polymer |
| Charging time | 3 hrs |
| Operating time | 10 hrs |
| Operating temperature range | 0°C to +40°C |
| Storage temperature range | –10°C to +70°C |
| Passive noise attenuation | 25 dB |

## PSC 03R-050 mains unit

| | |
|---|---|
| Nominal input voltage | 110–240 V~ |
| Nominal input current | max. 0.2 A |
| Mains frequency | 50–60 Hz |
| Nominal output voltage | 5 V ⎓ |
| Nominal output current | max. 0.5 A |
| Operating temperature range | 0°C to +45°C |
| Storage temperature range | –40°C to +85°C |
| Relative humidity | 20 to 90% |
| Weight | approx. 61 g |

## Bluetooth

| | |
|---|---|
| Bluetooth® | version 2.1 + EDR |
| Range | up to 10 m |
| Transmission frequency | 2.4 GHz |
| Transmission power | 8 dBm |
| Protocoles | A2DP, AVRCP |
| Codecs | SBC, apt-X |

## apt-X audio coding

**Outstanding audio quality**

apt-X technology is what wireless audio has been waiting for. With apt-X audio coding, you can be assured of crisp, pure and full stereo sound. It allows you to not only hear, but experience and feel the audio as it was intended. Utilizing apt-X, **Bluetooth** can now offer wireless audio quality that is indistinguishable from the highest quality wired connection.

**Professional grade sound**

Until now, apt-X has been the best-kept secret of the professional audio industry. From major public broadcasters to film production studios, apt-X is used throughout the world to transmit high quality digital audio from A to Z in real-time. It was developed to meet the exacting standards of musicians and audio engineers who love the exceptional dynamic range and high fidelity it provides.

Now available on selected consumer devices, the technology ensures that music lovers everywhere can stream the rich listening experience that only apt-X can deliver.

**Revolutionizing Bluetooth listening**

**Bluetooth** technology has revolutionized our communications and lifestyle by eliminating troublesome wires and letting us get on with life "on the move". Listening to a mobile phone conversation on a **Bluetooth** earpiece sounds just fine but when it comes to delivering full stereo sound, a little extra help is required. apt-X works within **Bluetooth** to deliver CD quality audio, ensuring you are getting the most from your wireless listening experience.

In order to deliver two-channel digital sound within the **Bluetooth** A2DP profile, audio compression is necessary. While traditional audio compression technologies struggle to provide full-bandwidth, high-fidelity audio over **Bluetooth**, apt-X works to ensure you enjoy the fullest, richest sound your music collection has to offer.

**apt-X legacy**

If you have ever been to the movies or listened to the radio then chances are you'll already have heard apt-X in action. Over 20,000 radio stations across the world and thousands of cutting-edge film studios rely on apt-X for high quality audio delivery.

The digital compression technology now known as apt-X was originally developed in Queen's University, Belfast, Northern Ireland. The technology was first brought to market for radio automation applications to store CD quality audio on computer hard drives for direct playout during radio shows, hence automating the process of the disc jockey.

The acclaim the technology received lead to further research and development and throughout the 1990s the technology was used by Broadcast and Post-production studios worldwide to deliver high-fidelity, low latency audio in situations where bandwidth was limited. The same core principles that have earned apt-X worldwide acclaim in the Broadcast and Post-Production markets make it the perfect solution for delivering high quality audio on wireless devices. apt-X is leading the way in bringing pro-audio quality to the discerning consumer.

### apt-X key features:

- Blind listening tests with industry reference audiences have shown that apt-X over Bluetooth is indistinguishable from audio delivered over wired technology. Unlike psychoacoustic-based technologies such as MP3 or AAC, apt-X can be used to transport audio without degrading the audio quality. With MPEG/AAC compression, the encoding process is destructive and content perceived as "irrelevant" is discarded. apt-X's transparent, non-destructive approach ensures that every frequency present in the original signal is preserved in the encoded and decoded signal.
- Dynamic range of >92 dB for 16 bit audio and >120 dB for 24 bit audio.
- The overall framework of apt-X ensures a high degree of resilience to random bit errors, with the bit error response well matched to the auditory response of the human ear. apt-X employs connection and synchronization techniques to ensure a robust connection and enable delivery of audio even under stressful conditions.
- Shortest processing delay of any professional audio compression technology. Many current wireless devices suffer from unwanted delays which cause lip-sync issues, apt-X can enable real-time delivery of wireless audio ensuring seamless integration when used with video devices.
- apt-X encoded audio fits neatly within the available bandwidth of wireless transmission standards to offer an efficient solution for bandwidth-restricted connections.

# Manufacturer Declarations

## Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product. For the current warranty conditions, please visit our website at www.sennheiser.com or contact your Sennheiser partner.

## CE Declaration of Conformity

These devices comply with the basic requirements and other relevant provisions of the following directives:

- R&TTE Directive (1999/5/EC)
- EMC Directive (2004/108/EC)
- Low Voltage Directive (2006/95/EC)
- RoHS Directive (2002/95/EC)
- WEEE Directive (2002/96/EC)
- Battery Directive (2006/66/EC)

The declaration is available on the internet at www.sennheiser.com. Before putting the devices into operation, please observe the respective country-specific regulations!

## Statements regarding FCC and Industry Canada

**FCC Declaration of Conformity (DoC)**

SENNHEISER
Model No: PX 210 BT

We,

Sennheiser Electronic Corporation
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One Enterprise Drive • Old Lyme •
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declare the above device comply with the requirements of Federal Communications Commission.

This device complies with Part 15 of the FCC rules. Operation is subjected to the following two conditions:
1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: John Falcone

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This class B digital apparatus complies with the Canadian ICES-003.

Changes or modifications made to this equipment not expressly approved by Sennheiser electronic Corp. may void the FCC authorization to operate this equipment.

## In compliance with:

| | |
|---|---|
| USA | FCC ID: DMOCBSSAB<br>Since the radiated output power of this Class1 BT device is far below the FCC radio frequency exposure limits, it is not subjected to routine RF exposure evaluation as per Section 2.1093 of the FCC rules. |
| Canada | IC: 2009A – MMBTX |
| Europe | CE 0889 |
| Australia / New Zeeland | N340 |
| Singapore | Complies with IDA Standards DB100582 |
| Korea | SE9-PX210BT |
| China | CMIIT ID: 2009DJ3546 |
| Japan | R 203WWJN000008 |
| Taiwan | CCAB09LP4100T2 |
| Russia | ME61 |

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